

REMARKS

Claims 89-96, 98-102, 111, and 112 are pending in this application. By this Amendment, claims 89-94, 111, and 112 are amended. No new matter is added.

Entry of the amendments is proper under 37 CFR §1.116 since the amendments: (a) place the application in condition for allowance (for the reasons discussed herein); (b) do not raise any new issue requiring further search and/or consideration (as the amendments amplify issues previously discussed throughout prosecution and in the October 24 personal interview); (c) do not present any additional claims without canceling a corresponding number of finally rejected claims; and (d) place the application in better form for appeal, should an appeal be necessary. The amendments are necessary and were not earlier presented because they are made in response to suggestions made by the Examiner in the October 24 personal interview. Entry of the amendments is thus respectfully requested.

The courtesies extended to Applicants' representative by Examiner Kruer at the interview held October 24 are appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below and constitute Applicants' record of the interview.

A. Claim Amendments

As discussed in the personal interview, claims 89-94, 111, and 112 are amended to clarify that the laminated sheet heated in the heating step has been cooled by passage between the chill roll and the pressure roll. As agreed to in the interview, these amendments are not narrowing amendments and do not introduce new matter.

B. Claims 89, 100, and 112

The Office Action rejects claims 89, 100, and 112 under 35 U.S.C. §103(a) as being unpatentable over Chow (U.S. Patent No. 5,134,046) in view of Steele (U.S. Patent

No. 5,242,714), Fitko (U.S. Patent No. 4,156,672), and Kawahara (U.S. Patent No. 4,828,136). Applicants respectfully traverse this rejection.

1. Claims 89 and 112

Claims 89 and 112 require steps of forming a laminated sheet, passing the laminated sheet between a chill roll and a pressure roll, and heating the laminated sheet that has been passed between the chill roll and the pressure roll. As agreed to in the personal interview, the cited references, alone or in combination, fail to teach or suggest a step of passing the laminated sheet between a chill roll and a pressure roll and a step of heating the laminated sheet that has been passed between the chill roll and the pressure roll, as required by claims 89 and 112.

As acknowledged in the Office Action and during the personal interview, Chow does not teach or suggest any post-formation treatment of a laminated sheet, and thus does not teach or suggest a step of passing the laminated sheet between a chill roll and a pressure roll and a step of heating the laminated sheet that has been passed between the chill roll and the pressure roll, as required by claims 89 and 112. In addition, as discussed in the personal interview, Steele and Fitko also fail to teach or suggest the claimed passing and heating steps, and thus fail to remedy the deficiencies of Chow.

The Office Action cites Kawahara as remedying these deficiencies of Chow. However, as agreed to in the personal interview, Kawahara also fails to teach or suggest a step of passing the laminated sheet between a chill roll and a pressure roll and a step of heating the laminated sheet that has been passed between the chill roll and the pressure roll, as required by claims 89 and 112.

Specifically, Kawahara is cited for disclosing that "aluminum may be laminated to thermoplastic resin layers by various known methods such as hot melting, extrusion coating, sandwich lamination ..." See the Office Action at p. 13, second full paragraph. However, as

agreed to in the personal interview, Kawahara teaches only the formation of a laminate, and does not teach or suggest any post-formation treatment of a laminated sheet. See Kawahara at col. 14, line 63, to col. 15, line 25. Accordingly, as agreed to in the personal interview, Kawahara does not teach or suggest a step of passing the laminated sheet between a chill roll and a pressure roll and a step of heating the laminated sheet that has been passed between the chill roll and the pressure roll, as required by claims 89 and 112.

For at least these reasons, Chow, alone or in view of Steele, Fitko, and Kawahara, fails to teach or suggest every feature of claims 89 and 112.

2. Claim 100

Claim 100 requires a step of processing one of a surface of an aluminum layer by chemical conversion treatment with an aqueous solution comprising a mixture of a phenolic resin, a trivalent chromium fluoride compound, and phosphoric acid. As agreed to in the personal interview, the cited references, alone or in combination, fail to teach or suggest a chemical conversion treatment with an aqueous solution comprising a mixture of a phenolic resin, a trivalent chromium fluoride compound, and phosphoric acid, as required by claim 100.

As acknowledged in the Office Action and during the personal interview, Chow does not teach or suggest a chemical conversion treatment with an aqueous solution comprising a mixture of a phenolic resin, a trivalent chromium fluoride compound, and phosphoric acid. In addition, as discussed in the personal interview, Fitko and Kawahara also fail to teach or suggest the claimed chemical conversion treatment with an aqueous solution comprising a mixture of a phenolic resin, a trivalent chromium fluoride compound, and phosphoric acid, and thus fail to remedy the deficiencies of Chow.

The Office Action cites Steele as remedying these deficiencies of Chow. However, as agreed to in the personal interview, Steel also fails to teach or suggest a chemical conversion treatment with an aqueous solution comprising a mixture of a phenolic resin, a trivalent chromium fluoride compound, and phosphoric acid, as required by claim 100.

Specifically, Steele is cited for disclosing "first applying a pre-treating solution comprising polyalkenylphenol and fluorine source ... [t]hen a conversion coating compris[ing] a trivalent chromium component and a phosphate component..." See the Office Action at p. 12, third full paragraph. Steele discloses a first pretreatment solution that may contain a derivative of polyalkenylphenol. See the abstract. Steele further discloses a second, different, solution that may contain a trivalent chromium compound and a phosphate component. See col. 4, lines 24-40. However, as agreed to in the personal interview, Steele fails to teach or suggest a chemical conversion treatment with an aqueous solution comprising a mixture of a phenolic resin, a trivalent chromium fluoride compound, and phosphoric acid, as required by claim 100. In contrast to claim 100, Steele requires that the derivative of polyalkenylphenol is contained in an entirely different solution from the trivalent chromium compound and the phosphate component, and thus these components are not contained in a mixture.

For at least these reasons, Chow, alone or in view of Steele, Fitko, and Kawahara, fails to teach or suggest every feature of claim 100.

3. Conclusion

For at least the reasons discussed above, claims 89, 100, and 112 would not have been obvious over Chow, alone or in view of Steele, Fitko, and Kawahara. Accordingly, claims 89, 100, and 112 are patentable over Chow, alone or in view of Steele, Fitko, and Kawahara. Reconsideration and withdrawal of the rejection are respectfully requested.

C. Claims 90, 95, 100, and 111

The Office Action rejects claims 90, 95, 100, and 111 under 35 U.S.C. §103(a) as being unpatentable over Chow in view of Steele, Koike (U.S. Patent No. 4,664,994), Fitko, and Kawahara. Applicants respectfully traverse this rejection.

Chow, Steele, Kawahara, and claim 100 are discussed above in Section B.

1. Claims 90, 95, and 111

Claims 90, 95, and 111 require steps of forming a laminated sheet, passing the laminated sheet between a chill roll and a pressure roll, and heating the laminated sheet that has been passed between the chill roll and the pressure roll. As discussed above in Section B, the cited references, alone or in combination, fail teach or suggest a step of passing the laminated sheet between a chill roll and a pressure roll and a step of heating the laminated sheet that has been passed between the chill roll and the pressure roll, as required by claims 90, 95, and 111.

As discussed above in Section B, Chow fails teach or suggest the claimed passing and heating steps, and Fitko and Steel each fails to remedy the deficiencies of Chow. As acknowledged in the personal interview, Koike also fails to remedy the deficiencies of Chow, because Koike also fails to teach or suggest the claimed passing and heating steps.

The Office Action cites Kawahara as remedying these deficiencies of Chow. However, for the reasons discussed above in Section B, Kawahara also fails to remedy the deficiencies of Chow. Specifically, Kawahara also fails to teach or suggest a step of passing the laminated sheet between a chill roll and a pressure roll and a step of heating the laminated sheet that has been passed between the chill roll and the pressure roll, as required by claims 90, 95, and 111.

For at least these reasons, and for the reasons discussed above in Section B, Chow, alone or in view of Steele, Koike, Fitko, and Kawahara, fails to teach or suggest every feature of claims 90, 95, and 111.

2. Claim 100

As discussed above in Section B, claim 100 requires a step of processing one of a surface of an aluminum layer by chemical conversion treatment with an aqueous solution comprising a mixture of a phenolic resin, a trivalent chromium fluoride compound, and phosphoric acid. As discussed above in Section B, the cited references, alone or in combination, fail to teach or suggest a chemical conversion treatment with an aqueous solution comprising a mixture of a phenolic resin, a trivalent chromium fluoride compound, and phosphoric acid, as required by claim 100.

As discussed above in Section B, Chow does not teach or suggest a chemical conversion treatment with an aqueous solution comprising a mixture of a phenolic resin, a trivalent chromium fluoride compound, and phosphoric acid, and Fitko and Kawahara fail to remedy the deficiencies of Chow. As acknowledged in the personal interview, Koike also fails to remedy the deficiencies of Chow, because Koike also fails to teach or suggest the claimed chemical conversion treatment.

The Office Action cites Steele as remedying these deficiencies of Chow. However, for the reasons discussed above in Section B, Steele also fails to remedy the deficiencies of Chow. Specifically, Steele also fails to teach or suggest a chemical conversion treatment with an aqueous solution comprising a mixture of a phenolic resin, a trivalent chromium fluoride compound, and phosphoric acid, as required by claim 100.

For at least these reasons, Chow, alone or in view of Steele, Koike, Fitko, and Kawahara fails to teach or suggest every feature of claim 100.

3. Conclusion

For at least the reasons discussed above, claims 90, 95, 100, and 111 would not have been obvious over Chow, alone or in view of Steele, Koike, Fitko, and Kawahara.

Accordingly, claims 90, 95, 100, and 111 are patentable over Chow, alone or in view of Steele, Koike, Fitko, and Kawahara. Reconsideration and withdrawal of the rejection are respectfully requested.

D. Claims 101 and 102

The Office Action rejects claims 101 and 102 under 35 U.S.C. §103(a) as being unpatentable over Chow in view of Steele, Koike, Fitko, and Kawahara, and further in view of Kiriazis (U.S. Patent No. 6,083,336). Applicants respectfully traverse this rejection.

1. Claim 101

Claim 101 requires a step of processing one of a surface of an aluminum layer by chemical conversion treatment with an aqueous solution comprising a mixture of a phenolic resin, a trivalent chromium fluoride compound, and phosphoric acid. As discussed above in Section B, the cited references, alone or in combination, fail to teach or suggest a chemical conversion treatment with an aqueous solution comprising a mixture of a phenolic resin, a trivalent chromium fluoride compound, and phosphoric acid, as required by claim 101.

As discussed above in Section B, Chow does not teach or suggest a chemical conversion treatment with an aqueous solution comprising a mixture of a phenolic resin, a trivalent chromium fluoride compound, and phosphoric acid, and Fitko and Kawahara fail to remedy the deficiencies of Chow. As acknowledged in the personal interview, Koike and Kiriazis also fail to remedy the deficiencies of Chow, because Koike and Kiriazis also fail to teach or suggest the claimed chemical conversion treatment.

The Office Action cites Steele as remedying these deficiencies of Chow. However, for the reasons discussed above in Section B, Steel also fails to remedy the deficiencies of

Chow. Specifically, Steele also fails to teach or suggest a chemical conversion treatment with an aqueous solution comprising a mixture of a phenolic resin, a trivalent chromium fluoride compound, and phosphoric acid, as required by claim 101.

For at least these reasons, Chow, alone or in view of Steele, Koike, Fitko, Kawahara, and further in view of Kiriazis fails to teach or suggest every feature of claim 101.

2. Claim 102

Claim 102 requires steps of forming a laminated sheet, passing the laminated sheet between a chill roll and a pressure roll, and heating the laminated sheet that has been passed between the chill roll and the pressure roll. As discussed above in Section B, the cited references, alone or in combination, fail teach or suggest a step of passing the laminated sheet between a chill roll and a pressure roll and a step of heating the laminated sheet that has been passed between the chill roll and the pressure roll, as required by claim 102.

As discussed above in Section B, Chow fails teach or suggest the claimed passing and heating steps, and Fitko and Steel each fails to remedy the deficiencies of Chow. As acknowledged in the personal interview, Koike and Kiriazis also fail to remedy the deficiencies of Chow, because Koike and Kiriazis also fail to teach or suggest the claimed passing and heating steps.

The Office Action cites Kawahara as remedying these deficiencies of Chow. However, for the reasons discussed above in Section B, Kawahara also fails to remedy the deficiencies of Chow. Specifically, Kawahara also fails to teach or suggest a step of passing the laminated sheet between a chill roll and a pressure roll and a step of heating the laminated sheet that has been passed between the chill roll and the pressure roll, as required by claim 102.

For at least these reasons, and for the reasons discussed above in Section B, Chow, alone or in view of Steele, Koike, Fitko, and Kawahara, and further in view of Kiriazis fails to teach or suggest every feature of claim 102.

3. Conclusion

For at least the reasons discussed above, claims 101 and 102 would not have been obvious over Chow, alone or in view of Steele, Koike, Fitko, and Kawahara, and further in view of Kiriazis. Accordingly, claims 101 and 102 are patentable over Chow, alone or in view of Steele, Koike, Fitko, and Kawahara, and further in view of Kiriazis. Reconsideration and withdrawal of the rejection are respectfully requested.

E. Claims 91, 92, and 96

The Office Action rejects claims 91, 92, and 96 under 35 U.S.C. §103(a) as being unpatentable over Chow in view of Steele, Koike, Aoyama (U.S. Patent No. 4,597,818), and Kawahara. Applicants respectfully traverse this rejection.

Claims 91, 92, and 96 require steps of forming a laminated sheet, passing the laminated sheet between a chill roll and a pressure roll, and heating the laminated sheet that has been passed between the chill roll and the pressure roll. As discussed above in Section B, the cited references, alone or in combination, fail teach or suggest a step of passing the laminated sheet between a chill roll and a pressure roll and a step of heating the laminated sheet that has been passed between the chill roll and the pressure roll, as required by claims 91, 92, and 96.

As discussed above in Section B, Chow fails teach or suggest the claimed passing and heating steps, and Steel each fails to remedy the deficiencies of Chow. As acknowledged in the personal interview, Koike and Aoyama also fail to remedy the deficiencies of Chow, because Koike and Aoyama also fail to teach or suggest the claimed passing and heating steps.

The Office Action cites Kawahara as remedying these deficiencies of Chow.

However, for the reasons discussed above in Section B, Kawahara also fails to remedy the deficiencies of Chow. Specifically, Kawahara also fails to teach or suggest a step of passing the laminated sheet between a chill roll and a pressure roll and a step of heating the laminated sheet that has been passed between the chill roll and the pressure roll, as required by claims 91, 92, and 96.

For at least these reasons, and for the reasons discussed above in Section B, Chow, alone or in view of Steele, Koike, Aoyama, and Kawahara, fails to teach or suggest every feature of claims 91, 92, and 96. Thus, claims 91, 92, and 96 would not have been obvious over Chow, alone or in view of Steele, Koike, Aoyama, and Kawahara. Accordingly, claims 91, 92, and 96 are patentable over Chow, alone or in view of Steele, Koike, Aoyama, and Kawahara. Reconsideration and withdrawal of the rejection are respectfully requested.

F. Claims 93, 94, 98, and 99

The Office Action rejects claims 93, 94, 98, and 99 under 35 U.S.C. §103(a) as being unpatentable over Chow in view of Steele, Sanyo (JP 75037668B), Fitko, and Kawahara. Applicants respectfully traverse this rejection.

Claims 93, 94, 98, and 99 require steps of forming a laminated sheet, passing the laminated sheet between a chill roll and a pressure roll, and heating the laminated sheet that has been passed between the chill roll and the pressure roll. As discussed above in Section B, the cited references, alone or in combination, fail teach or suggest a step of passing the laminated sheet between a chill roll and a pressure roll and a step of heating the laminated sheet that has been passed between the chill roll and the pressure roll, as required by claims 93, 94, 98, and 99.

As discussed above in Section B, Chow fails teach or suggest the claimed passing and heating steps, and Fitko and Steele each fails to remedy the deficiencies of Chow. As acknowledged in the personal interview, Sanyo also fails to remedy the deficiencies of Chow, because Sanyo also fails to teach or suggest the claimed passing and heating steps.

The Office Action cites Kawahara as remedying these deficiencies of Chow. However, for the reasons discussed above in Section B, Kawahara also fails to remedy the deficiencies of Chow. Specifically, Kawahara also fails to teach or suggest a step of passing the laminated sheet between a chill roll and a pressure roll and a step of heating the laminated sheet that has been passed between the chill roll and the pressure roll, as required by claims 93, 94, 98, and 99.

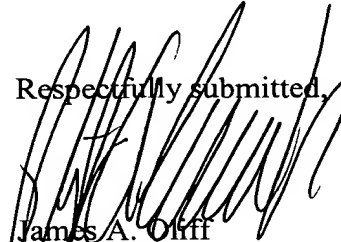
For at least these reasons, and for the reasons discussed above in Section B, Chow, alone or in view of Steele, Sanyo, Fitko, and Kawahara, fails to teach or suggest every feature of claims 93, 94, 98, and 99. Thus, claims 93, 94, 98, and 99 would not have been obvious over Chow, alone or in view of Steele, Sanyo, Fitko, and Kawahara. Accordingly, claims 93, 94, 98, and 99 are patentable over Chow, alone or in view of Steele, Sanyo, Fitko, and Kawahara. Reconsideration and withdrawal of the rejection are respectfully requested.

G. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 89-96, 98-102, 111, and 112 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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JAO:PAC/jam

Attachment:

Petition for Extension of Time

Date: November 7, 2005

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